WERNER'S
NOMENCLATURE OF COLOURS,

ADAPTED TO

Zoology, Botany, Chemistry, Mineralogy, Anatomy, and the Arts,

By P. SYME.

SECOND EDITION.

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NOMENCLATURE OF COLOURS.

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NOMENCLATURE OF COLOURS,

WITH ADDITIONS,

ARRANGED SO AS TO RENDER IT HIGHLY USEFUL

TO THE

ARTS AND SCIENCES,

PARTICULARLY

Zoology, Botany, Chemistry, Mineralogy, and Morbid Anatomy.

ANNEXED TO WHICH ARE

EXAMPLES SELECTED FROM WELL-KNOWN OBJECTS

IN THE

ANIMAL, VEGETABLE, AND MINERAL KINGDOMS.

BY

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WERNER'S

NOMENCLATURE OF COLOURS.

A NOMENCLATURE of colours, with proper coloured examples of the different tints, as a general standard to refer to in the description of any object, has been long wanted in arts and sciences. It is singular, that a thing so obviously useful, and in the description of objects of natural history and the arts, where co-

lour is an object indispensably necessary, should have been so long overlooked. In describing any object, to specify its colours is always useful; but where colour forms a character, it becomes absolutely necessary. How defective, therefore, must description be when the terms used are ambiguous; and where there is no regular standard to refer to. Description without figure is generally difficult to be comprehended; description and figure are in many instances still defective; but description, figure, and colour combined form the most perfect representation, and are next to seeing the object itself. An object may be described of such a colour

by one person, and perhaps mistaken by another for quite a different tint: as we know the names of colours are frequently misapplied; and often one name indiscriminately given to many colours. To remove the present confusion in the names of colours, and establish a standard that may be useful in general science, particularly those branches, viz. Zoology, Botany, Mineralogy, Chemistry, and Morbid Anatomy, is the object of the present attempt.

The author, from his experience and long practice in painting objects which required the most accurate eye to distin-

guish colours, hopes that he will not be thought altogether unqualified for such an undertaking. He does not pretend indeed that it is his own idea; for, so far as he knows, Werner is entitled to the honour of having suggested it. This great mineralogist, aware of the importance of colours, found it necessary to establish a Nomenclature of his own in his description of minerals, and it is astonishing how correct his eye has been; for the author of the present undertaking went over Werner's suites of colours, being assisted by Professor Jameson, who was so good as arrange specimens of the suites of minerals mentioned by Werner,

as examples of his Nomenclature of Colours. He copied the colours of these minerals, and found the component parts of each tint, as mentioned by Werner, uncommonly correct. Werner's suites of colours extend to seventy-nine tints. Though these may answer for the description of most minerals, they would be found defective when applied to general science: the number therefore is extended to one hundred and ten, comprehending the most common colours or tints that appear in nature. These may be called standard colours; and if the terms pale, deep, dark, bright, and dull, be applied to any of the standard colours,

suppose crimson, or the same colour tinged lightly with other colours, suppose grey, or black, or brown, and applied in this manner:

1st.
Crimson } tinged with Grey. Black. Brown, &c.

2d.
Pale Crimson } tinged with Grey. Black. Brown.

3d.
Deep Crimson } tinged with Grey. Black. Brown.

4th.
Dark Crimson } tinged with Grey. Black. Brown.

5th.
Bright Crimson } tinged with Grey. Black. Brown.

6th.
Dull Crimson } tinged with Grey. Black. Brown, &c.

If all the standard colours are applied in this manner, or reversed, as grey tinged with crimson, &c. the tints may be mul-

tiplied to upwards of thirty thousand, and yet vary very little from the standard colours with which they are combined. The suites of colours are accompanied with examples in, or references to, the Animal, Vegetable, and Mineral Kingdoms, as far as the author has been able to fill them up, annexed to each tint, so as to render the whole as complete as possible. Werner, in his suites of colours, has left out the terms Purple and Orange, and given them under those of Blue and Yellow ; but, with deference to Werner's opinion, they certainly are as much entitled to the name of colours as green, grey, brown, or any other com-

position colour whatever, and in this work Orange and Purple are named, and arranged in distinct places. To accomplish which, it was necessary to change the places of two or three of Werner's colours, and alter the names of a few more; but, to avoid any mistake, the letter W. is placed opposite to all Werner's colours. Those colours in Werner's suites, whose places or names are changed, are also explained, by placing Werner's term opposite to the name given, which was found more appropriate to the component parts of the changed colours. Those who have paid any attention to colours, must be aware that it is very

difficult to give colours for every object that appears in nature; the tints are so various, and the shades so gradual, they would extend to many thousands: it would be impossible to give such a number, in any work on colours, without great expence; but those who study the colours given, will, by following Werner's plan, improve their general knowledge of colours; and the eye, by practice, will become so correct, that by examining the component parts of the colour of any object, though differing in shade or tint from any of the colours given in this series, they will see that it partakes of, or passes into, some one of

them. It is of great importance to be able to judge of the intermediate shades or tints between colours, and find out their component parts, as it enables us correctly to describe the colour of any object whatever.

Werner's plan for describing the tints, or shades between colours, is as follows: "When one colour approaches slightly to another, it is said to incline towards it; when it stands in the middle between two colours, it is said to be intermediate; when, on the contrary, it evidently approaches very near to one of the colours, it is said to fall, or pass, into it." In this

work the metallic colours are left out, because, were they given, they would soon tarnish; and they are in some measure unnecessary, as every person is well acquainted with the colour of gold, silver, brass, copper, &c. Also the play and changeability of colour is left out, as it is impossible to represent them; however, they are well known to be combinations of colours, varying as the object is changed in position, as in the pigeon's neck, peacock's tail, opal, pearl, and other objects of a similar appearance. To gain a thorough knowledge of colours, it is of the utmost consequence to be able to distinguish their component parts. Werner

has described the combinations in his suites of colours, which are very correct; these are given, and the same plan followed, in describing those colours which are added in this series. The method of distinguishing colours, their shades, or varieties, is thus described by Werner: "Suppose we have a variety of colour, which we wish to refer to its characteristic colour, and also to the variety under which it should be arranged, we first compare it with the principal colours, to discover to which of them it belongs, which, in this instance, we find to be green. The next step is to discover to which of the varieties of green in the sys-

tem it can be referred. If, on comparing it with emerald green, it appears to the eye to be mixed with another colour, we must, on comparison, endeavour to discover what this colour is: if it prove to be greyish white, we immediately refer it to apple green; if, in place of greyish white, it is intermixed with lemon yellow, we must consider it grass green; but if it contains neither greyish white nor lemon yellow, but a considerable portion of black, it forms blackish green. Thus, by mere ocular inspection, any person accustomed to discriminate colours correctly, can ascertain and analyse the different varieties that occur in the Ani-

mal, Vegetable, and Mineral Kingdoms. In an undertaking of this kind, the greatest accuracy being absolutely necessary, neither time nor pains have been spared to render it as perfect as possible; and it being also of the first importance, that the colours should neither change nor fade, from long practice and many experiments, the author has ascertained that his method of mixing and laying on colours will ensure their remaining constant, unless they are long exposed to the sun, which affects, in some degree, all material colours; he has therefore arranged Werner's suites of colours, with his own additions, into a book, and in

that form presents it to men of science, trusting, that by removing the present ambiguity in the names of colours, this Nomenclature will be found a most useful acquisition to the arts and sciences.

SINCE the former edition of this Work was published, Professor Jameson, in his "Treatise on the External Characters of Minerals," makes the following observations.

"Many attempts have been made to delineate the different colours that occur in the Mineral Kingdom, with the view of enabling those who do not possess a mineralogical collection, or who may not be familiar

with colours, to know the different varieties mentioned in the descriptions of mineralogists. Wiedemann, Estner, Ludwig, and several others, have published tables of this kind; but all of them were deficient, not only in accuracy, but also in durability. Having the good fortune to possess a Colour-Suite of Minerals, made under the eye of Werner, by my late friend H. Meuder of Freyberg, and being desirous of making this collection as generally useful as possible, I mentioned my wish to Mr Syme, painter to the Wernerian and Horticultural Societies, who readily undertook to make a delineation of all the varieties in the collection. This he executed with his usual skill and accuracy; adding, at the same time, to the series several other colours, which he has distinguished by appropriate names, and arranged along with those in the Wernerian System. The whole have been published in a series of tables, in a treatise which ought to be in the hands of every mineralogist, and indeed in the possession of naturalists of every description.

" The older and some of the modern mineralogists, in their descriptions of the species of minerals, use only single varieties of colour. It was Werner who first made the remark, that single varieties are not

characteristic, and that it is only by using the whole range or suite of the mineral, that we are enabled to employ this character with advantage. Thus, it is not sufficient to say that epidote is green, that beryl is green, or that topaz is yellow; we must mention every variety of colour which these minerals possess, because each species of mineral is expressed by a particular suite or group of colours.

"Although colours are frequently applied by botanists for distinguishing species of plants, particularly in the class cryptogamia, still they in general hesitate in employing them in the discrimination of plants in the higher divisions of the system. It is alleged that the colours of plants change very readily, particularly when cultivated in our gardens, and that, therefore, so variable a character should not be attended to. It is not denied, that the colours of plants frequently undergo very considerable changes when cultivated in our gardens; but these domesticated plants are no longer the natural unaltered species, and therefore are not objects of the attention of the systematic botanist. It is also known, that plants, even in their natural situations, owing to disease, experience great changes in their colours; but these

diseased individuals would surely never be taken by the botanist for characteristic examples of the species. Indeed it is highly probable, that every species of plant, in its natural region, has a determined colour, or suite of colours. Hence colours may be used as a most interesting character, particularly in those systems of botany which are termed Natural.

" This character may also be advantageously used in giving correct ideas of the changes of colour which plants experience by cultivation, or when removed from their natural soil and climate. Interesting coloured maps might be constructed, to shew the general changes in the colour of the vegetable world from the equator towards the poles; and the difference of colours in vegetables in the two hemispheres, and in the Old and New World.

" In the Animal Kingdom, the number of colours is very great. They often form the most striking feature in the external appearance of the species; and hence have been considered by systematics as affording discriminating characters of much value. The agriculturist, engaged in the breeding of animals, often witnesses striking changes in their colours, and these varieties of colour, either alone, or

conjoined with other characters, characterize his different breeds. But here, as in botany, a regular systematic Nomenclature of Colour is much wanted.

"The anatomist will find it much to his advantage, to use in his descriptions some regular and fixed standard of colours; and in Morbid Anatomy, in particular, the importance of such an aid will be immediately perceived: Thus, the various changes in the animal system, from the slightest degree of inflammation to complete gangrene, are strikingly marked by the different colours the parts assume. Accurate enumerations of these colours as they occur in single varieties, or in groups, conjoined with descriptions of the changes in form, transparency, lustre, consistency, hardness, structure, and weight, observable in the diseased parts, will convey an accurate conception of the diseased parts to those who have not an opportunity of seeing it. But to effect this, the anatomist and surgeon must agree on some fixed nomenclature, not only of colour, but also of form, transparency, lustre, consistency, hardness, and structure; and a better model cannot be pointed out than that contrived by Werner, for the description and discrimination of minerals.

"Lastly, the chemist will have daily opportunities of experiencing its utility; and the meteorologist, and the hydrographer, by the use of an accurate and standard table of colours, will be enabled, in a much more satisfactory manner than heretofore, to describe the skies and meteors of different countries, and the numerous varieties of colour that occur in the waters of the ocean, of lakes and rivers."

WHITES.

N.º	Names.	Colours.	ANIMAL.	VEGETABLE.	MINERAL.
1	*Snow White.*		*Breast of the black headed Gull.*	*Snow Drop.*	*Carara Marble and Calc Sinter.*
2	*Reddish White.*		*Egg of Grey Linnet.*	*Back of the Christmas Rose.*	*Porcelain Earth.*
3	*Purplish White.*		*Junction of the Neck and Back of the Kittiwake Gull.*	*White Geranium or Storks-Bill.*	*Arragonite.*
4	*Yellowish White.*		*Egret.*	*Hawthorn Blossom.*	*Chalk and Tripoli.*
5	*Orange coloured White.*		*Breast of White or Screech Owl.*	*Large Wild Convolvulus.*	*French Porcelain Clay.*
6	*Greenish White.*		*Vent Coverts of Golden crested Wren.*	*Polyanthus Narcissus.*	*Calc Sinter.*
7	*Skimmed milk White.*		*White of the Human Eyeballs.*	*Back of the Petals of Blue Hepatica.*	*Common Opal.*
8	*Greyish White.*		*Inside Quill-feathers of the Kittiwake.*	*White Hamburgh Grapes.*	*Granular Limestone.*

COMPONENT PARTS

OF

THE COLOURS

GIVEN IN

THIS SERIES.

WHITES.

No. 1. Snow White, is the characteristic colour of the whites; it is the purest white colour; being free of all intermixture, it resembles new-fallen snow. W.

2. Reddish White, is composed of snow white, with a very minute portion of crimson red and ash grey. W.

3. Purplish White, is snow white, with the slightest tinge of crimson red and Berlin blue, and a very minute portion of ash grey.

No. 4. Yellowish White, is composed of snow white, with a very little lemon yellow and ash grey. W.

5. Orange-coloured White, is snow white, with a very small portion of tile red and king's yellow, and a minute portion of ash grey.

6. Greenish White, is snow white, mixed with a very little emerald green and ash grey. W.

7. Skimmed-milk White, is snow white, mixed with a little Berlin blue and ash grey. W.

8. Greyish White, is snow white, mixed with a little ash grey. W.

GREYS.

Nº	Names.	Colours.	ANIMAL.	VEGETABLE.	MINERAL.
9	*Ash Grey.*		*Breast of long tailed Hen Titmouse.*	*Fresh Wood ashes*	*Flint.*
10	*Smoke Grey.*		*Breast of the Robin round the Red.*		*Flint.*
11	*French Grey.*		*Breast of Pied Wag tail.*		
12	*Pearl Grey.*		*Backs of black-headed and Kittiwake Gulls.*	*Back of Petals of Purple Hepatica.*	*Porcelain Jasper.*
13	*Yellowish Grey.*		*Vent coverts of White Rump.*	*Stems of the Barberry.*	*Common Calcedony.*
14	*Bluish Grey.*		*Back, and tail Coverts Wood Pigeon.*		*Limestone*
15	*Greenish Grey.*		*Quill feathers of the Robin.*	*Bark of Ash Tree.*	*Clay Slate. Wacke.*
16	*Blackish Grey.*		*Back of Nut-hatch.*	*Old Stems of Hawthorn.*	*Flint.*

GREYS.

No. 9. Ash Grey, is the characteristic colour of Werner's greys; he gives no description of its component parts; it is composed of snow white, with portions of smoke and French grey, and a very little yellowish grey and carmine red. W.

10. Smoke Grey, is ash grey mixed with a little brown. W.

11. French Grey, nearly the steel grey of Werner, without the lustre, is greyish white, with a slight tinge of black and carmine red.

12. Pearl Grey, is ash grey mixed with a little crimson red and blue, or bluish grey with a little red. W.

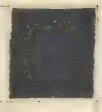
No. 13. Yellowish Grey, is ash grey mixed with lemon yellow and a minute portion of brown. W.

14. Bluish Grey, is ash grey mixed with a little blue. W.

15. Greenish Grey, is ash grey mixed with a little emerald green, a small portion of black, and a little lemon yellow. W.

16. Blackish Grey, blackish lead grey of Werner without the lustre, is ash grey, with a little blue and a portion of black.

BLACKS

No	Names	Colours	ANIMAL	VEGETABLE	MINERAL
17	Greyish Black		Water Ouzel. Breast and upper Part of Back of Water Hen.		Basalt.
18	Bluish Black		Largest Black Slug	Crowberry.	Black Cobalt Ochre.
19	Greenish Black		Breast of Lapwing		Hornblende
20	Pitch or Brownish Black		Guillemot. Wing Coverts of Black Cock.		Vesuvian Mica
21	Reddish Black		Spots on large Wings of Tyger Moth. Breast of Pochard Duck.	Berry of Fuchsia Coccinea.	Oliven Ore
22	Ink Black			Berry of Deadly Night Shade	Oliven Ore
23	Velvet Black		Mole. Tail Feathers of Black Cock.	Black of Red and Black West Indian Peas.	Obsidian

BLACKS.

No. 17. Greyish Black, is composed of velvet black, with a portion of ash grey. W

18. Bluish Black, is velvet black, mixed with a little blue and blackish grey. W.

19. Greenish Black, is velvet black, mixed with a little brown, yellow, and green. W.

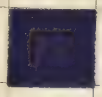
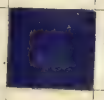
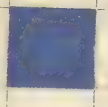
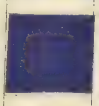
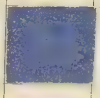
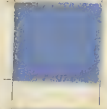
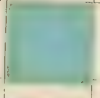
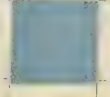
20. Pitch, or Brownish Black, is velvet black, mixed with a little brown and yellow. W.

21. Reddish Black, is velvet black, mixed with a very little carmine red, and a small portion of chesnut brown.

22. Ink Black, is velvet black, with a little indigo blue in it.

No. 23. Velvet Black, is the characteristic colour of the blacks; it is the colour of black velvet. W.

BLUES

No.	Names	Colours	ANIMAL	VEGETABLE	MINERAL
24	Scotch Blue		Throat of Blue Titmouse.	Stamina of Single Purple Anemone.	Blue Copper Ore.
25	Prussian Blue.		Beauty Spot on Wing of Mallard Drake.	Stamina of Bluish Purple Anemone.	Blue Copper Ore
26	Indigo Blue				Blue Copper Ore.
27	China Blue		Rhamphites Nitens	Back Parts of Gentian Flower.	Blue Copper Ore from Chessy.
28	Azure Blue.		Breast of Emerald crested Manakin.	Grape Hyacinth. Gentian.	Blue Copper Ore.
29	Ultra marine Blue.		Upper Side of the Wings of small blue Heath Butterfly.	Borrage.	Azure Stone or Lapis Lazuli.
30	Flax-flower Blue.		Light Parts of the Margin of the Wings of Devil's Butterfly.	Flax flower.	Blue Copper Ore
31	Berlin Blue.		Wing Feathers of Jay.	Hepatica.	Blue Sapphire.
32	Verditter Blue				Lenticular Ore.
33	Greenish Blue			Great Fennel Flower.	Turquois. Flour Spar.
34	Greyish Blue.		Back of blue Titmouse	Small Fennel Flower.	Iron Earth.

BLUES.

No. 24. Scotch Blue, is Berlin blue, mixed with a considerable portion of velvet black, a very little grey, and a slight tinge of carmine red. W.

25. Prussian Blue, is Berlin blue, with a considerable portion of velvet black, and a small quantity of indigo blue.

26. Indigo Blue, is composed of Berlin blue, a little black, and a small portion of apple green.

27. China Blue, is azure blue, with a little Prussian blue in it.

28. Azure Blue, is Berlin blue, mixed with a little carmine red: it is a burning colour. W.

No. 29. Ultramarine Blue, is a mixture of equal parts of Berlin and azure blue.

30. Flax-Flower Blue, is Berlin blue, with a slight tinge of ultramarine blue.

31. Berlin Blue, is the pure, or characteristic colour of Werner. W.

32. Verditter Blue, is Berlin blue, with a small portion of verdigris green.

33. Greenish Blue, the sky blue of Werner, is composed of Berlin blue, white, and a little emerald green. W.

34. Greyish Blue, the smalt blue of Werner, is composed of Berlin blue, with white, a small quantity of grey, and a hardly perceptible portion of red. W.

PURPLES.

N.º	Names	Colours	Animal	Vegitable	Mineral
35	Bluish Lilac Purple.		Male of the Lebellula Depressa.	Blue Lilac.	Lepidolite.
36	Bluish Purple.		Papilio Argeolus. Azure Blue Butterfly.	Parts of White and Purple Crocus.	
37	Violet Purple.			Purple Aster	Amethyst.
38	Pansy Purple.		Chrysomela Goettingensis.	Sweet-scented Violet.	Derbyshire Spar.
39	Campanula Purple.			Canterbury Bell. Campanula Persicifolia.	Fluor Spar.
40	Imperial Purple.			Deep Parts of Flower of Saffron Crocus.	Fluor Spar.
41	Auricula Purple.		Egg of largest Blue bottle, or Flesh Fly.	Largest Purple Auricula.	Fluor Spar.
42	Plum Purple.			Plum.	Fluor Spar.
43	Red Lilac Purple.		Light Spots of the upper Wings of Peacock Butterfly.	Red Lilac. Pale Purple Primrose.	Lepidolite.
44	Lavender Purple.		Light Parts of Spots on the under Wings of Peacock Butterfly.	Dried Lavender Flowers.	Porcelain Jasper.
45	Pale Blackish Purple.				Porcelain Jasper.

PURPLES.

No. 35. Bluish Lilac Purple, is bluish purple and white.

36. Bluish Purple, is composed of about equal parts of Berlin blue and carmine red.

37. Violet Purple, violet blue of Werner, is Berlin blue mixed with red, and a little brown. W.

38. Pansy Purple, is indigo blue, with carmine red, and a slight tinge of raven black.

39. Campanula Purple, is ultramarine blue and carmine red, about equal parts of each: it is the characteristic colour.

No. 40. Imperial Purple, is azure and indigo blue, with carmine red, about equal parts of each.

41. Auricula Purple, is plum purple, with indigo blue and much carmine red.

42. Plum Purple, the plum blue of Werner, is composed of Berlin blue, with much carmine red, a very little brown, and an almost imperceptible portion of black. W.

43. Red Lilac Purple, is campanula purple, with a considerable portion of snow white, and a very little carmine red.

44. Lavender Purple, the lavender blue of Werner, is composed of blue, red, and a little brown and grey. W.

45. Pale Bluish Purple, is lavender purple mixed with a little red and black.

GREENS.

N.º	Names	Colours	ANIMAL	VEGETABLE	MINERAL
46	*Celandine Green.*		*Phalæna Margaritaria.*	*Back of Tussilago Leaves.*	*Beryl.*
47	*Mountain Green.*		*Phalæna Viridaria.*	*Thick-leaved Cudweed, Silver-leaved Almond.*	*Actynolite Beryl.*
48	*Leek Green.*			*Sea Kale. Leaves of Leeks in Winter.*	*Actynolite Prase.*
49	*Blackish Green.*		*Elytra of Meloe Violaceus.*	*Dark Streaks on Leaves of Cayenne Pepper.*	*Serpentine.*
50	*Verdigris Green.*		*Tail of small Long-tailed Green Parrot.*		*Copper Green.*
51	*Bluish Green.*		*Egg of Thrush.*	*Under Disk of Wild Rose Leaves.*	*Beryl.*
52	*Apple Green.*		*Under Side of Wings of Green Broom Moth.*		*Crysoprase.*
53	*Emerald Green.*		*Beauty Spot on Wing of Teal Drake.*		*Emerald.*

GREENS.

No. 46. Celindine Green, is composed of verdigris green and ash grey. W.

47. Mountain Green, is composed of emerald green, with much blue and a little yellowish grey. W.

48. Leek Green, is composed of emerald green, with a little brown and bluish grey. W.

49. Blackish Green, is grass green mixed with a considerable portion of black. W.

50. Verdigris Green, is composed of emerald green, much Berlin blue, and a little white. W.

No. 51. Bluish Green, is composed of Berlin blue, and a little lemon yellow and greyish white.

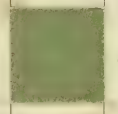
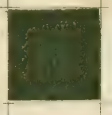
52. Apple Green, is emerald green mixed with a little greyish white. W.

53. Emerald Green, is the characteristic colour of Werner; he gives no description of the component parts of any of the characteristic colours; it is composed of about equal parts of Berlin blue and gamboge yellow.

54. Grass Green, is emerald green mixed with a little lemon yellow. W.

55. Duck Green, W. a new colour of Werner's, added since the publication of his nomenclature; it is composed of emerald green, with a little indigo

GREENS.

No.	Names	Colours	ANIMAL	VEGETABLE	MINERAL
54	*Grass Green*		*Scarabæus Nobilis.*	*General Appearance of Grass Fields. Sweet Sugar Pear*	*Uran Mica.*
55	*Duck Green*		*Neck of Mallard*	*Upper Disk of Yew Leaves.*	*Ceylanite*
56	*Sap Green.*		*Under Side of lower Wings of Orange tip Butterfly.*	*Upper Disk of Leaves of woody Night Shade.*	
57	*Pistachio Green.*		*Neck of Eider Drake*	*Ripe Pound Pear. Hypnum like Saxifrage.*	*Crysolite.*
58	*Asparagus Green.*		*Brimstone Butterfly.*	*Variegated Horse-Shoe Geranium.*	*Beryl.*
59	*Olive Green.*			*Foliage of Ligunum vitæ.*	*Epidote Olivene Ore.*
60	*Oil Green.*		*Animal and Shell of common Water Snail.*	*Nonpareil Apple from the Wall.*	*Beryl*
61	*Siskin Green.*		*Siskin.*	*Ripe Coalmar Pear. Irish Pitcher Apple.*	*Uran Mica.*

blue, much gamboge yellow, and a very little carmine red.

No. 56. Sap Green, is emerald green, with much saffron yellow, and a little chesnut brown.

57. Pistachio Green, is emerald green mixed with a little lemon yellow, and a small quantity of brown. W.

58. Asparagus Green, is pistachio green, mixed with much greyish white. W.

59. Olive Green, is grass green mixed with much brown. W.

60. Oil Green, is emerald green mixed with lemon yellow, chesnut brown, and yellowish grey. W.

61. Siskin Green, is emerald green mixed with much lemon yellow, and a little yellowish white. W.

YELLOWS.

No. 62. Sulphur Yellow, is lemon yellow mixed with emerald green and white. W.

63. Primrose Yellow, is gamboge yellow mixed with a little sulphur yellow, and much snow white.

64. Wax Yellow, is composed of lemon yellow, reddish brown, and a little ash grey. W.

65. Lemon Yellow, the characteristic colour of the yellow series of Werner, the colour of ripe lemons; W. it is found to be a mixture of gamboge yellow and a little ash grey: being a mixed colour, it cannot be adopted as the characteristic colour; the characteristic colours of the blues, reds,

YELLOWS.

No.	Names	Colours	ANIMAL	VEGETABLE	MINERAL
62	*Sulphur Yellow.*		*Yellow Parts of large Dragon Fly.*	*Various Coloured Snap dragon.*	*Sulphur*
63	*Primrose Yellow.*		*Pale Canary Bird.*	*Wild Primrose*	*Pale coloured Sulphur.*
64	*Wax Yellow.*		*Larva of large Water Beetle.*	*Greenish Parts of Nimpared Apple.*	*Semi Opal.*
65	*Lemon Yellow.*		*Large Wasp or Hornet.*	*Shrubby Goldilocks.*	*Yellow Orpiment.*
66	*Gamboge Yellow.*		*Wings of Goldfinch. Canary Bird.*	*Yellow Jasmine.*	*High coloured Sulphur.*
67	*Kings Yellow.*		*Head of Golden Pheasant.*	*Yellow Tulip. Cinque foil.*	
68	*Saffron Yellow.*		*Tail Coverts of Golden Pheasant.*	*Anthers of Saffron Crocus.*	

YELLOWS.

N.º	Names	Colours	ANIMAL.	VEGITABLE.	MINERAL.
69	*Gallstone Yellow.*		*Gallstones.*	*Marigold Apple.*	
70	*Honey Yellow.*		*Lower Parts of Neck of Bird of Paradise.*		*Fluor Spar.*
71	*Straw Yellow.*		*Polar Bear.*	*Oat Straw.*	*Schorlite. Calamine.*
72	*Wine Yellow.*		*Body of Silk Moth.*	*White Currants.*	*Saxon Topaz.*
73	*Sienna Yellow.*		*Vent Parts of Tail of Bird of Paradise.*	*Stamina of Honey-suckle.*	*Pale Brazilian Topaz.*
74	*Ochre Yellow.*		*Vent Coverts of Red Start.*		*Porcelain Jasper.*
75	*Cream Yellow.*		*Breast of Teal Drake.*		*Porcelain Jasper.*

and yellows ought to be pure and free from all intermixture with any other colour; gamboge, as the purest yellow colour, is adopted instead of lemon yellow, as the characteristic colour of the yellows.

No. 66. Gamboge Yellow, is the characteristic colour.

67. King's Yellow, is gamboge yellow, with a small portion of saffron yellow.

68. Saffron Yellow, is gamboge yellow, with gallstone yellow, about equal parts of each.

69. Gallstone Yellow, is gamboge yellow, with a small quantity of Dutch orange, and a minute proportion of honey yellow.

No. 70. Honey Yellow, is sulphur yellow mixed with chesnut brown. W.

71. Straw Yellow, is sulphur yellow mixed with much greyish white and a little ochre yellow. W.

72. Wine Yellow, is sulphur yellow mixed with reddish brown and grey, with much snow white. W.

73. Sienna Yellow, is primrose yellow, with a little ochre yellow.

74. Ochre Yellow, is sienna yellow, with a little light chesnut brown. W.

75. Cream Yellow, is ochre yellow mixed with a little white, and a very small quantity of Dutch orange. W.

ORANGE.

N°	Names	Colours.	ANIMAL.	VEGITABLE.	MINERAL.
76	*Dutch Orange.*		*Crest of Golden crested Wren.*	*Common Marigold. Seedpod of Spindle tree.*	*Streak of Red Orpiment.*
77	*Buff Orange.*		*Streak from the Eye of the King Fisher.*	*Stamina of the large White Cistus.*	*Natrolite.*
78	*Orpiment Orange.*		*The Neck Ruff of the Golden Pheasant. Belly of the Warty Newt.*	*Indian Cress.*	
79	*Brownish Orange.*		*Eyes of the largest Flesh-Fly.*	*Style of the Orange Lily.*	*Dark Brazilian Topaz.*
80	*Reddish Orange.*		*Lower Wings of Tyger Moth.*	*Hemimeris. Buff Hibiscus.*	
81	*Deep Reddish Orange.*		*Gold Fish lustre abstracted.*	*Scarlet leadington Apple.*	

ORANGE.

No. 76. Dutch Orange, the orange yellow of Werner, is gamboge yellow, with carmine red. W.

77. Buff Orange, is sienna yellow, with a little Dutch Orange.

78. Orpiment Orange, the characteristic colour, is about equal parts of gamboge yellow and arterial blood red.

79. Brownish Orange, is orpiment orange, with a little hyacinth red, and a small quantity of light chesnut brown.

80. Reddish Orange, is buff orange mixed with a considerable portion of tile red.

81. Deep Reddish Orange, is Dutch orange mixed with much scarlet red.

REDS.

No. 82. Tile Red, is hyacinth red mixed with much greyish white, and a small portion of scarlet red. W.

83. Hyacinth Red, is scarlet red, with lemon yellow and a minute proportion of brown.

84. Scarlet Red, is arterial blood red, with a little gamboge yellow.

85. Vermilion Red, is scarlet red, with a minute portion of brownish red.

86. Aurora Red, is tile red, with a little arterial blood red, and a slight tinge of carmine red. W.

87. Arterial Blood Red, is the characteristic colour of the red series.

RED.

Nº	Names.	Colours.	ANIMAL.	VEGETABLE.	MINERAL.
82	*Tile Red.*		*Breast of the Cock Bullfinch.*	*Shrubby Pimpernel.*	*Porcelain Jasper.*
83	*Hyacinth Red.*		*Red Spots of the Lygœus Apterus Fly.*	*Red on the golden Rennette Apple.*	*Hyacinth.*
84	*Scarlet Red.*		*Scarlet Ibis or Curlew, Mark on Head of Red Grouse.*	*Large red Oriental Poppy, Red Parts of red and black Indian Peas.*	*Light red Cinnaber.*
85	*Vermillion Red.*		*Red Coral.*	*Love Apple.*	*Cinnaber.*
86	*Aurora Red.*		*Vent converts of Pied Wood-Pecker.*	*Red on the Naked Apple.*	*Red Orpiment.*
87	*Arterial Blood Red.*		*Head of the Cock Gold-finch.*	*Corn Poppy, Cherry.*	
88	*Flesh Red.*		*Human Skin.*	*Larkspur.*	*Heavy Spar, Limestone.*
89	*Rose Red.*			*Common Garden Rose.*	*Figure Stone.*
90	*Peach Blossom Red.*			*Peach Blossom.*	*Red Cobalt Ore.*

RED.

Nº	Names.	Colours.	ANIMAL.	VEGETABLE.	MINERAL.
91	*Carmine Red.*			*Raspberry. Cocks Comb, Carnation Pink.*	*Oriental Ruby.*
92	*Lake Red.*			*Red Tulip, Rose Officinalus.*	*Spinel.*
93	*Crimson Red.*				*Precious Garnet.*
94	*Purplish Red.*		*Outside of Quills of Terico.*	*Dark Crimson Officinal Garden Rose.*	*Precious Garnet.*
95	*Cochineal Red.*			*Under Disk of decayed Leaves of None-so-pretty.*	*Dark Cinnaber*
96	*Veinous Blood Red.*		*Veinous Blood.*	*Musk Flower, or dark Purple Scabious.*	*Pyrope.*
97	*Brownish Purple Red.*			*Flower of deadly Nightshade.*	*Red Antimony Ore.*
98	*Chocolate Red.*		*Breast of Bird of Paradise.*	*Brown Disk of common Marigold.*	
99	*Brownish Red.*		*Mark on Throat of Red-throated Diver.*		*Iron Flint.*

No. 88. Flesh Red, is rose red mixed with tile red and a little white. W.

89. Rose Red, is carmine red, with a great quantity of snow white, and a very small portion of cochineal red. W.

90. Peach Blossom Red, is lake red mixed with much white. W.

91. Carmine Red, the characteristic colour of Werner, is lake red, with a little arterial blood red. W.

92. Lake Red, the crimson red of Werner, is arterial blood red, with a portion of Berlin blue. W

93. Crimson Red, is carmine red, with a little indigo blue. W

No. 94. Purplish Red, the columbine red of Werner, is carmine red, with a little Berlin blue, and a small portion of indigo blue. W.

95. Cochineal Red, is lake red mixed with bluish grey. W.

96. Veinous Blood Red, is carmine red mixed with brownish black. W.

97. Brownish Purple Red, the cherry red of Werner, is lake red mixed with brownish black, and a small portion of grey. W.

98. Chocolate Red, is veinous blood red mixed with a little brownish red.

99. Brownish Red, is chocolate red mixed with hyacinth red, and a little chesnut brown. W.

BROWNS.

N°	Names.	Colours.	ANIMAL.	VEGETABLE.	MINERAL.
100	*Deep Orange-coloured Brown.*		*Head of Pochard. Wing coverts of Sheldrake.*	*Female Spike of Catstail Reed.*	
101	*Deep Reddish Brown.*		*Breast of Pochard, and Neck of Teal Drake.*	*Dead Leaves of green Panic Grass.*	*Brown Blende.*
102	*Umber Brown.*		*Moor Buzzard.*	*Disk of Rubeckia.*	
103	*Chesnut Brown.*		*Neck and Breast of Red Grouse.*	*Chesnuts.*	*Egyptian Jasper.*
104	*Yellowish Brown.*		*Light Brown Spots on Guinea-Pig. Breast of Hoopoe.*		*Iron Flint, and common Jasper.*
105	*Wood Brown.*		*Common Weasel. Light parts of Feathers on the Back of the Snipe.*	*Hazel Nuts.*	*Mountain Wood.*
106	*Liver Brown.*		*Middle Parts of Feathers of Hen Pheasant, and Wing coverts of Grosbeak.*		*Semi Opal.*
107	*Hair Brown.*		*Head of Pintail Duck*		*Wood Tin*
108	*Broccoli Brown.*		*Head of Black-headed Gull.*		*Zircon.*
109	*Clove Brown.*		*Head and Neck of Male Kestril.*	*Stems of Black Currant Bush.*	*Axinite, Rock Cristal.*
110	*Blackish Brown.*		*Stormy Petrel. Wing Coverts of black Cock. Forehead of Foumart.*		*Mineral Pitch.*

BROWNS.

No. 100. Deep Orange-coloured Brown, is chesnut brown, with a little reddish brown, and a small quantity of orange brown.

101. Deep Reddish Brown, is chesnut brown, with a little chocolate red.

102. Umber Brown, is chesnut brown, with a little blackish brown.

103. Chesnut Brown, the characteristic colour of the browns of Werner's series, W. is deep reddish brown and yellowish brown.

104. Yellowish Brown, is chesnut brown mixed with a considerable portion of lemon yellow. W.

No. 105. Wood Brown, is yellowish brown mixed with ash grey.

106. Liver Brown, is chesnut brown mixed with a little black and olive green.

107. Hair Brown, is clove brown mixed with ash grey. W.

108. Broccoli Brown, is clove brown mixed with ash grey, and a small tinge of red. W.

109. Olive Brown, is ash grey mixed with a little blue, red, and chesnut brown. W.

110. Blackish Brown, is composed of chesnut brown and black. W.

LIST OF COLOURS

CHANGED FROM WERNER'S ARRANGEMENT.

Werner's Names	*Changed to*
Milk White.	Skimmed Milk White.
Blackish Lead Grey, but without lustre.	Blackish Grey.
Steel Grey, but without lustre.	French Grey.
Smalt Blue.	Greyish Blue.
Sky Blue.	Greenish Blue.
Violet Blue.	Violet Purple.
Plum Blue.	Plum Purple.
Lavender Blue.	Lavender Purple.
Orange Yellow.	Dutch Orange.
Crimson Red.	Lake Red.
Columbine Red.	Purplish Red.
Cherry Red.	Brownish Purple Red.